

Claims

We claim:

1. A distributed learning management architecture, comprising:

an authoring module for creating educational content;
a learning management server for managing an on-line learning environment,
wherein the learning management module receives the educational content created with
the authoring module and provides the educational content to a set of content servers; and
a set of delivery servers for delivering a set of interface pages corresponding to the
on-line learning environment to students, wherein the set of content servers
communicates the educational content to the students based on requests issued by the
students using the set of interface pages, and wherein performance data generated by the
students based on the educational content is returned to the set of delivery servers.

2. The architecture of claim 1, further comprising a set of live session servers for
delivering live learning sessions to the students based on the requests issued by the
students using the interface pages.

3. The architecture of claim 1, wherein the set of content servers comprises a plurality of
content servers, wherein the set of delivery servers comprises a plurality of delivery
servers, and wherein each of the plurality of content servers corresponds to one of the
plurality of delivery servers.

4. The architecture of claim 1, wherein the authoring module provides client-based creation of educational content.
5. The architecture of claim 1, wherein the students communicate with the architecture over a network using browsers, and wherein the set of interface pages are delivered to the browsers.
6. The architecture of claim 1, wherein the learning management server, the set of content servers, the authoring module and the set of delivery servers are implemented as separate elements within the architecture.
7. The architecture of claim 1, wherein the set of interface pages displays possible selections of educational content that are available to the students, wherein the possible selections vary based on identities of the students.
8. The architecture of claim 1, further comprising a content storage module for receiving the educational content from the authoring module, and for providing the educational content to the learning management server.
9. The architecture of claim 1, further comprising a mail server for providing notifications to the students and instructors pertaining to the on-line learning environment.

10. A component-based distributed learning management architecture, comprising:
 - an authoring module for client-based creation of educational content;
 - a learning management server for managing an on-line learning environment, wherein the learning management module receives the educational content created with the authoring module;
 - a plurality of delivery servers for delivering a set of interface pages corresponding to the on-line learning environment to students;
 - a plurality of content servers for receiving the educational content from the learning management server, and for delivering the educational content to the students based on requests issued by the students using the set of interface pages; and
 - a plurality of live session servers for delivering live learning sessions to the students based on the requests, wherein performance data generated by the students based on the educational content and the live learning sessions is returned to the plurality of delivery servers, and at predefined intervals, the performance data sent to the learning management server for analysis.

11. The architecture of claim 10, wherein the students communicate with the architecture over a network using browsers, and wherein the set of interface pages are delivered to the browsers.

12. The architecture of claim 10, wherein the learning management server, the plurality of delivery servers, the plurality of content servers and the plurality of live session servers are all implemented as separate elements within the architecture.

13. The architecture of claim 10, wherein the set of interface pages displays possible selections of education content that are available to the students, wherein the possible selections vary based on identities of the students.

14. The architecture of claim 10, further comprising:

a content storage module for receiving the educational content from the authoring module, and for providing the educational content to the learning management server; and
an application server for managing the learning management server and the set of delivery servers.

15. The architecture of claim 10, further comprising a mail server for providing notifications to the students and instructors pertaining to the on-line learning environment.

16. A computerized learning management method, comprising:

- creating educational content using an authoring module;
- communicating the educational content created with the authoring module to a learning management server that manages an on-line learning environment;
- communicating the educational content from the learning management server to a set of content servers;
- delivering a set of interface pages corresponding to the on-line learning environment to students from a set of delivery servers, where the set of interfaces pages displays possible selections of educational content that are available to the students; and
- delivering the educational content to the students from the set of content servers based on requests made by the students using the set of interface pages.

17. The method of claim 16, further comprising communicating performance data generated by the students based on the educational content to the set of delivery servers, and at predefined intervals, from the set of delivery servers to the learning management server for analysis.

18. The method of claim 16, further comprising delivering live learning sessions to the students based on the requests issued by the students using the interface pages from a set of live session servers.

19. The method of claim 16, wherein the creating step comprises interacting with the authoring module from a client.
20. The method of claim 16, wherein the set of interface pages are delivered to browsers operated by the students.
21. The method of claim 16, further comprising storing the educational content in a content storage module prior to communicating the educational content to the learning management server.
22. The method of claim 16, further transmitting notifications to the students and instructors from the learning management server.

23. An off-line learning client architecture, comprising:

- a download and synchronization manager for downloading educational content from an on-line learning system, and for managing an off-line learning environment on a client;
- a local delivery server for delivering a set of interface pages corresponding to the off-line learning environment to a student; and
- a local content server for providing the educational content to the student based on requests issued by the student using the set of interface pages, and wherein performance data generated by the student based on the educational content is provided to the download and synchronization manager for uploading to the on-line learning system.

24. The architecture of claim 23, wherein the architecture is implemented on a client.

25. The architecture of claim 23, further comprising a local application server for managing the local delivery server and the download and synchronization manager.